ABSTRACT

A distinctive absorbent article includes an absorbent core having multiple absorbent layers, wherein the absorbent layers interact in such a manner which preferentially locates absorbed liquid in an appointed, high saturation wicking layer. The localization of the liquid within this wicking layer increases the potential of this layer to move liquid through capillary action due to the higher saturation level and increased amount of liquid available. The intake capability of the absorbent system is maintained or improved over current systems by keeping a second layer of the absorbent system at low saturation levels through as many insults of the product as possible, while providing optimum intake performance through appropriate control of the composite properties. The low saturation in this layer provides void volume for the incoming insult as well, as a high permeability, thus increasing the intake rate of the absorbent system as a whole, but the structure of the low saturation layer is also balanced to provide an appropriately high level of capillary tension to provide enough control of the liquid to stop leakage from occurring. This low saturation layer is used in addition to a surge material and provides intake functionality in addition to that provided by the surge material. In particular aspects of the invention, the body side layer of the absorbent core does not extend over the entire surface of the overall absorbent core, therefore is not used as the high saturation, wicking layer, but as the intake layer. This arrangement also allows the intake layer to be in direct contact with the incoming liquid, therefore allowing for more immediate access and improved intake function. In particular aspects, at least one primary layer region can have a heterogeneous structure. In additional configurations, the at least one primary layer region can include a plurality of two or more sublayers.